

What is Claimed is:

1. An insertion kit for inserting an electrochemical sensor into a patient, the insertion kit comprising:

an inserter comprising a portion having a sharp, rigid, planer structure adapted to support the sensor during insertion of the electrochemical sensor; and

an insertion gun having a port configured to accept the electrochemical sensor and the inserter, a driving mechanism for driving the inserter and the electrochemical sensor into the patient, and a retraction mechanism for removing the inserter from the patient while leaving the sensor within the patient.

2. The insertion kit of claim 1, wherein the insertion gun further comprises a cocking mechanism to maintain the inserter and electrochemical sensor in a cocked position prior to insertion into the patient, and a release mechanism to release the inserter and electrochemical sensor from the cocked position and permit the driving mechanism to drive the inserter and electrochemical sensor into the patient.

3. The insertion kit of claim 1, further comprising an electrochemical sensor for insertion into the patient using the inserter and insertion gun.

4. The insertion kit of claim 3 wherein the electrochemical sensor includes a barb to facilitate retention of the sensor within the patient.

5. The insertion kit of claim 3 wherein the electrochemical sensor is flexible.

6. The insertion kit of claim 1, wherein the insertion gun and inserter are configured to insert the electrochemical sensor into the patient at a depth of between about 2 to 12 mm.

7. The insertion kit of claim 1, wherein the insertion gun and inserter are configured to insert the electrochemical sensor into the patient at an angle between about 15° to 60° relative to a surface of the patient.

8. The insertion kit of claim 1, wherein the inserter has a cross-sectional width of 1 mm or less.

9. The insertion kit of claim 1, wherein the inserter has a cross-sectional height of 1 mm or less.
- 5 10. The insertion kit of claim 1, wherein the inserter gun is configured to mate with a mounting base of a sensor control unit.